ACC NR: AP6023210 SOURCE CODE: UR/0020/66/168/006/1342/1345

AUTHOR: Vil'shanskaya, N. Ya.; Yurzhenko, A. I.

ORG: Odessa State University im. I. I. Mechnikov (Odesskiy gosudarstvennyy universitet)

TITLE: Characteristics of the process of polymerization in an emulsion stabilized with nonionogenic emulsifiers

SOURCE: AN SSSR. Doklady, v. 168, no. 6, 1966, 1342-1345

TOPIC TAGS: emulsion polymerization, polystyrene

ABSTRACT: In order to clarify the influence of the hydrophilic part of the molecule of ionogenic emulsifiers on the emulsion polymerization of styrene, the authors studied polyglycol ethers (products of condensation of nonylphenol with various amounts of ethylene oxide) of the general formula

$$C_9H_{19}-C_6H_4-(OCH_2-CH_2)_n OH,$$

where n = 4, 10, 13, 30. These emulsifiers were added in various quantities to the polymerization system, and the yield of polystyrene was measured as a function of time. This yield was found to be independent of the content of emulsifiers with n from 4 to 13. In the case of n = 30, the polymer yield rose with the emulsifier con-

Card 1/2 UDC: 541.18.05

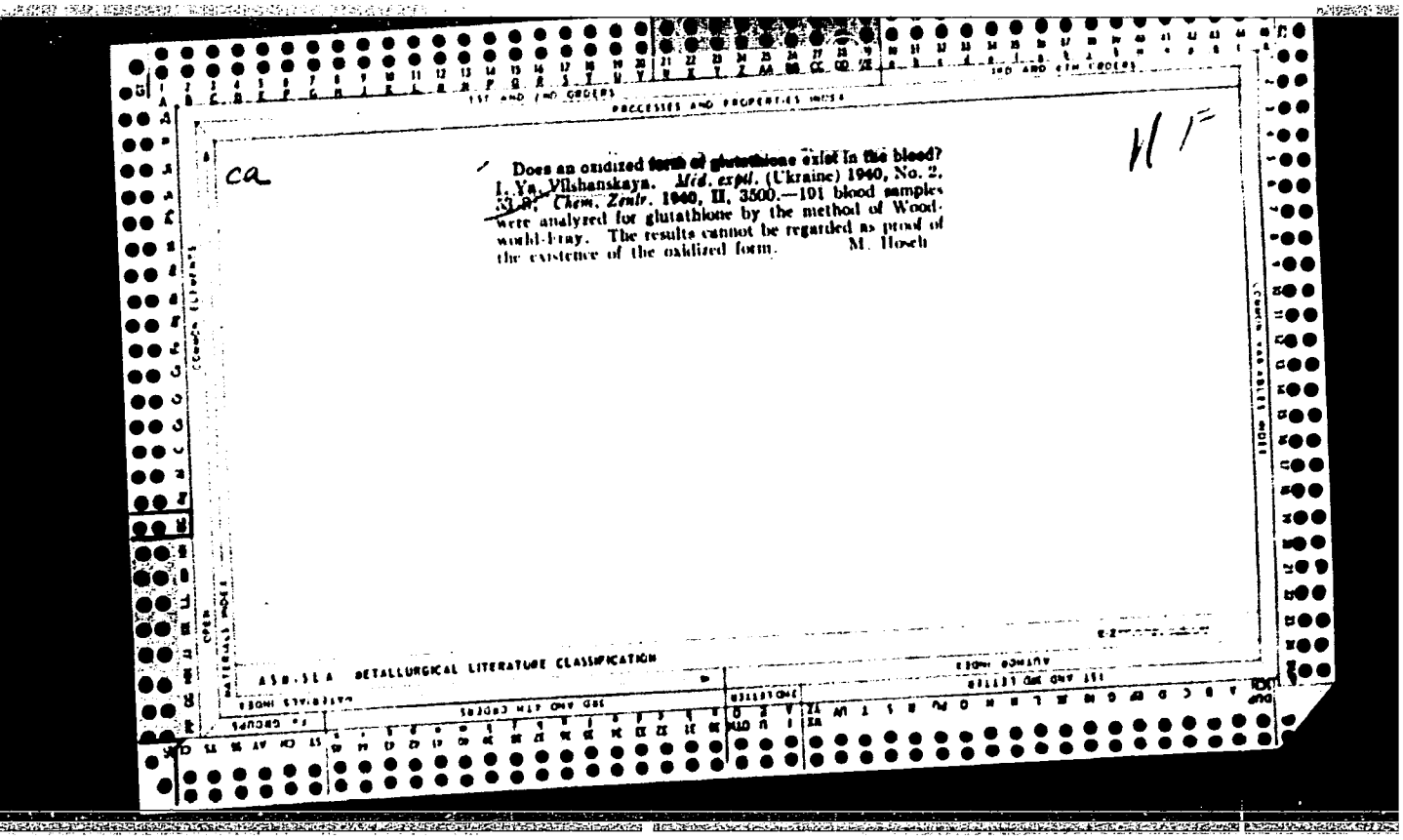
L 41219-66

ACC NR: AP6023210

tent, and the polymerization rate increased in direct proportion to this content, indicating a latex polymerization. From n = 4-13 to n = 30 there is a sharp increase in polymerization rate, indicating a definite influence of the hydrophilic part of the emulsifier molecule on the course of the emulsion polymerization reaction. The viscosity and hence the molecular weight of the polymers increases with the degree of polymerization for n = 4 to 13, in contrast to n = 30. This suggests that the change in the hydrophilic part of the emulsifier molecule causes a substantial change in the topochemistry of the polymerization: when n = 4 to 13, the process takes place in a dispersion of droplets, and the emulsifier acts only as a stabilizer, whereas in the case of n = 30, a micellar mechanism of polymerization occurs. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 12Oct65/ ORIG REF: 005/ OTH REF: 001

Card 2/2 mcp



ca

Does an oxidized form of glutathione exist in the blood? I. Ya. Vilshanskaya. *Med. exptl.* (Ukraine) 1940, No. 2. *C.A.* *Chem. Zentr.* 1940, II, 3500.—101 blood samples were analyzed for glutathione by the method of Woodward-Fray. The results cannot be regarded as proof of the existence of the oxidized form. M. Hoseh

H 1

RUSANOV, Boris Sergeyevich, kand. geologo-miner. nauk, laureat Stalinskoy premii; SHVETSOV, P.F., nauchnyy red.; KEL', N.G., nauchnyy red.; VIL'SHANSKIY, A.L., red.; POLYAKOV, M.G., tekhn. red.

[Hydrothermal movements of the earth's surface] Gidrotermicheskie dvizheniia zemnoi poverkhnosti. Moskva, Akad. nauk SSSR Iakutskii filial Sibirskogo otd-niia, 1961. 225 p. (MIRA 15:3)

1. Chleny-korrespondenty Akademii nauk SSSR (for Shvetsov, Kell').
(Earth movements) (Frozen ground)

VIL'SHANSKAYA, M.S.

Soviet literature on problems of microbiology, immunology, infectious diseases, and epidemiology published during the 3d quarter of 1959. Zhur. mikrobiol. epid. i immun. 32 no.7:150-153 Je '61. (MIRA 15:5)
(BIBLIOGRAPHY--MICROBIOLOGY)

DORMIDONTOVA, K.V., dotsent; VIL'SHANSKIY, E.N.

Visual acuity and refraction in children of preschool age.
Trudy 1-go MMI 32:28-37 '64. (MIRA 18:5)

BRYANTSEVA, M.K., kand.med.nauk; VIL'SHANSKIY, E.N.

ACTH and cortisone; their use in an eye disease clinic. Trudy 2-go MMI 32:66-84 '64. (MIRA 18:5)

VIL'CHANSKIY, P.N.

Coloboma of the crystalline lens. Trudy 1-go MMI 32:258-261 '64.
(MIRA 18:5)

VIL'SHANSKIY, F. L.

"A Study of Hydrogen Isotopes and Their Role in Foodstuff Toxic Infections." Sub 12 Apr 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

BAZHANOV, N.N.; VIL'SHANSKIY, G.N.

Experience of the treatment of teeth under nitrous oxide anesthesia in the stage of analgesia. Trudy 1-go MMI 44:15-18 '65.

Audioanesthesia in the treatment of teeth. Ibid.:19-22
(MIRA 18:12)

VIL'NYANSKIY, I.I., doktor med. nauk; DUDENKO, N.V., kand. med.nauk

Prognosis of tuberculosis in diabetics. Probl. tub. no.2 35-40 '65. (MIRA 18:12)

1. 2-ya otdeleniye legochnogo tuberkuleza (zav. - doktor med. nauk I.I.Vil'nyanskiy) Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza (direktor - dotsent I.S.Kruzhenko), Khar'kov.

Vil'shanskiy, N.L.

KOZLOV, I.M., arkhitektor; VIL'SHANSKIY, N.L., inzhener

Plan for dormitory building accomodating 56 persons designed by the State Institute for the Planning of Inhabited Places and Civilian Constructions, and for Surveying. Rats. i izobr. predl. v stroi. no.102:25-28 '55. (MLRA 8:10)
(Dormitories)

S/081/62/000/024/015/052
B117/B186

AUTHORS: Vil'shans'kiy, V. A., Yurzhenko, O. I.

TITLE: Study on the activity of emulsifiers, substituted alkyl pyridine derivatives, during emulsion polymerization of styrene

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24 (II), 1962, 829, abstract 24P58 (Dopovidi ta povidoml. L'vivs'k. un-t, no. 9, part 2, 1961, 81 - 82 [Ukr.])

TEXT: This is a study on the kinetics of styrene polymerization in an emulsion stabilized with pentadecyl pyridine bromide and pyridine derivatives substituted in the ring, in the presence of isopropyl benzene hydroperoxide as initiator. Pyridine derivatives: Methyl pyridine with the methyl group in positions 2,4, and 3; 2,4-dimethyl pyridine and 2,6-dimethyl pyridine; 2,4,6-trimethyl pyridine; pyridine carbonic acids (picolinic, nicotinic, and isonicotinic acids) and nicotinamide. It was shown that the polymerization rate using these emulsifiers is 2 - 3 orders of magnitude higher than that in bulk. The most active emulsifiers were found to be those having an amide group in position 3 as substituent

S/081/62/000/024/015/052
B117/B186

Study on the activity of ... ,

(100 % polymerization; molecular weight of the resulting polymer 150 000). Emulsifiers having a CH_3 group in position 3 are least active. [Abstracter's note: Complete translation.]

Card 2/2

VIL'SHAU, K.V.; GAVRILOVA, V.A.

Series of primary saturated normal alcohols. Report No.2: Change in physicochemical properties in the series of normal primary alcohols and the effect of impurities on their physical characteristics. Trudy IREA no.25:347-357 '63.

(MIRA 18:6)

SAMSONOVA, N.I.; KALYAZINA, N.S.; VIL'SHAU, K.V.

Preparation of specrally pure solvents. Report No.1: Isooctane, cyclohexane. Trudy IREA no.25:434-436 '63.

(MIRA 18:6)

[redacted], K. V.

"Investigation of the Physical and Absorptional Properties of Some Hydrocarbons of the Diphenyl Methane Series (Applicable to Sulfur Dioxide and Carbon Disulfide)." Cand Tech Sci, All-Union Sci Res Inst of Chemical Reagents, Min Chemical Industry USSR, Moscow, 1955. (KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

GEL'PERIN, N.I.; MATVEYEV, I.G.; VIL'SHAU, K.V.

Absorption of SO_2 and CS_2 by various hydrocarbons of the diphenylmethane series. Zhur. prikl. khim. 31 no.9:1323-1332 S '58. (MIRA 11:10)
(Sulfur dioxide) (Carbon disulfide) (Absorption)

VIL'SHAU, K.V.

USSR/Chemistry - Heat transfer agents. FD-3367

Card 1/1 Pub. 50 - 11/20

Authors : Matveyev, I. G. (deceased), Drapkina, D. A., Vil'shau, K. V., Globus, R. L., Gel'perin, N. I.

Title : The application of hydrocarbons of the diarylmethane series as high-temperature heat transfer agents

Periodical : Khim. prom. No 7, 426-427, Oct-Nov 1955

Abstract : Describe the properties of derivatives of diphenylmethane (ditolylmethane, dixylylmethane, dicumylmethane, and tetraisopropyldiphenylmethane). Compare these properties with those of Dowtherm [presumably Dowtherm A] and come to the conclusion that the substances mentioned are superior to Dowtherm as heat transfer media. State that the diphenylmethanes in question were synthesized by condensing the appropriate hydrocarbons with formaldehyde. Add that the synthesis of ditolylmethane has been carried out on a plant scale at the Kuskov Chemical Plant and that this hydrocarbon has been successfully used since 1953 as a heat transfer agent at 280-300° under pilot-plant conditions. Three references, all USSR, two since 1940.

Institution : All-Union Scientific Research Institute of Chemical Reagents

AID P - 2278

VIL'SHAU, K.V.

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 4/21

Authors : Gel'perin, N. I. and K. V. Vil'shau

Title : Study of the fractional distillation in laboratory columns packed with porcelain rings

Periodical: Zhur. prikl. khim., 28, no.3, 254-261, 1955

Abstract : The porcelain ring packing proposed by the All-Union Electrotechnical Institute (im. Lenin) may be used as a standard packing material because of its high efficiency, chemical resistance and simplicity of production. A mixture of benzene with dichloroethane was used in the experiments. Five tables, 6 diagrams, no references.

Institution: All-Union Scientific Research Institute of Chemical Reagents

Submitted : 0 9, 1953

VIL'SHCHAIKSKAYA, M.I.

Russian literature on problems in microbiology, immunology, infectious diseases and epidemiology published during the fourth quarter of 1957. Zhur. mikrobiol. epid. i immun. 29 no.10:143-151 O'58(MIRA 11:12)

(MICROBIOLOGY,
bibliog. (Rus))
(IMMUNOLOGY,
same)
(COMMUNICABLE DISEASES,
same)
(EPIDEMIOLOGY,
same)

TSEYDLER, S.A.; TEREKHOVA, T.G.; VIL'SHTEYN, R.M. (Moskva)

Sulfonamide bullous erythema simulating Stevens-Johnson syndrome. Arkh. pat. no.10:46-50 '64. (MIRA 18:10)

1. Institut morfologii cheloveka (dir.- chler-korrespondent AMN SSSR prof. A.P. Avtsyn) AMN SSSR i patologoanatomicheskoye otdeleniye Moskovskoy gorodskoy klinicheskoy infektsionnoy bol'nitsy No.7 (glavnyy vrach N.G. Zaleskver).

Vil'skiy

Poland / Zooparasitology - Parasitic Worms G-3

Abs Jour: Referat. Zh. Biol., No. 1, 1958, 830

Author : Vil'skiy

Title : A Biologic Study of Potato Nematode (Heterodera Rostochiensis Wr.) and Experimental Destruction by Chemical Means.

Orig Pub: Roczn. nauk rolniczyck, 1956, A73, No. 2, 245-288

Abstract: In the Bydgoshch district the development of one generation of potato nematodes lasts 53 days when potatoes are planted in June and 75 days when planted in April. Under conditions of field experimentation nematodes yielded but one generation during the vegetative period. The development of a female on an agar medium took 38-46 days, of a male 20-26 days. The checking of

Card 1/2

Poland / Zooparasitology - Parasitic Worms G-3

Abs Jour: Referat. Zh. Biol., No. 1, 1958, 830

potato fields for nematode infection should be conducted from the beginning to end of potato flowering. The use of a forbiate (methyl ester of dithiocarbaminic acid) for 1-2 days before planting potatoes, in dose of 1 ton/hect. mixed with sand 1:2, increased the harvest by 13-471%. Forbiate does not destroy cysts in the soil; its action lasts for 1 year. 37-38% of females survived on roots with use of dichlorethane (10 ton/hect.) 1-3 weeks before potato planting. After the harvest was collected the quantity of cysts increased.

Card 2/2

Vilskiy, A.

POLAND/Zooparasitology - Parasitic Worms. G-2

Abs Jour : Ref Zhur - Biol., No 6, 1958, 24325

Author : Vilskiy, A.
Inst :
Title : Potato Nematode in Poland and Measures for its Control.

Orig Pub : Postepy nauk roln., 1956, 3, No 1, 45-53

Abstract : Heterodera rostochiensis was identified for the first time in Poland in 1946. By 1955 it extended almost to the whole country. Potatoes and tomatoes were affected by it on 1780 farms. Attempts to control the parasite by creating improved plant environments as well as utilizing existing chemical remedies brought no results. In the author's opinion, in order to effect marked reduction of parasite incidence, crop rotation of many fields (5 or 6 fields) should be used.

Card 1/1

2. USSR (600)

4. Latvian Literature - History and Critisism

7. New materials on the history of Latvian literature in Leningrad archives. Latv. PSR Zin.Akad.Vestis no. 11, 1950

Monthly Lists of Russian Accessions, Library of Congress, March, 1953, Unclassfied.

1. VIL'SON, A. D. K.

2. USSR (600)

4. X Rays

7. Determination of crystal symmetry by X-ray analysis. Zhur. fiz. khim. 26 no. 10. 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

1. VIL'SON, A. D. K.

2. USSR (600)

4. Crystallography

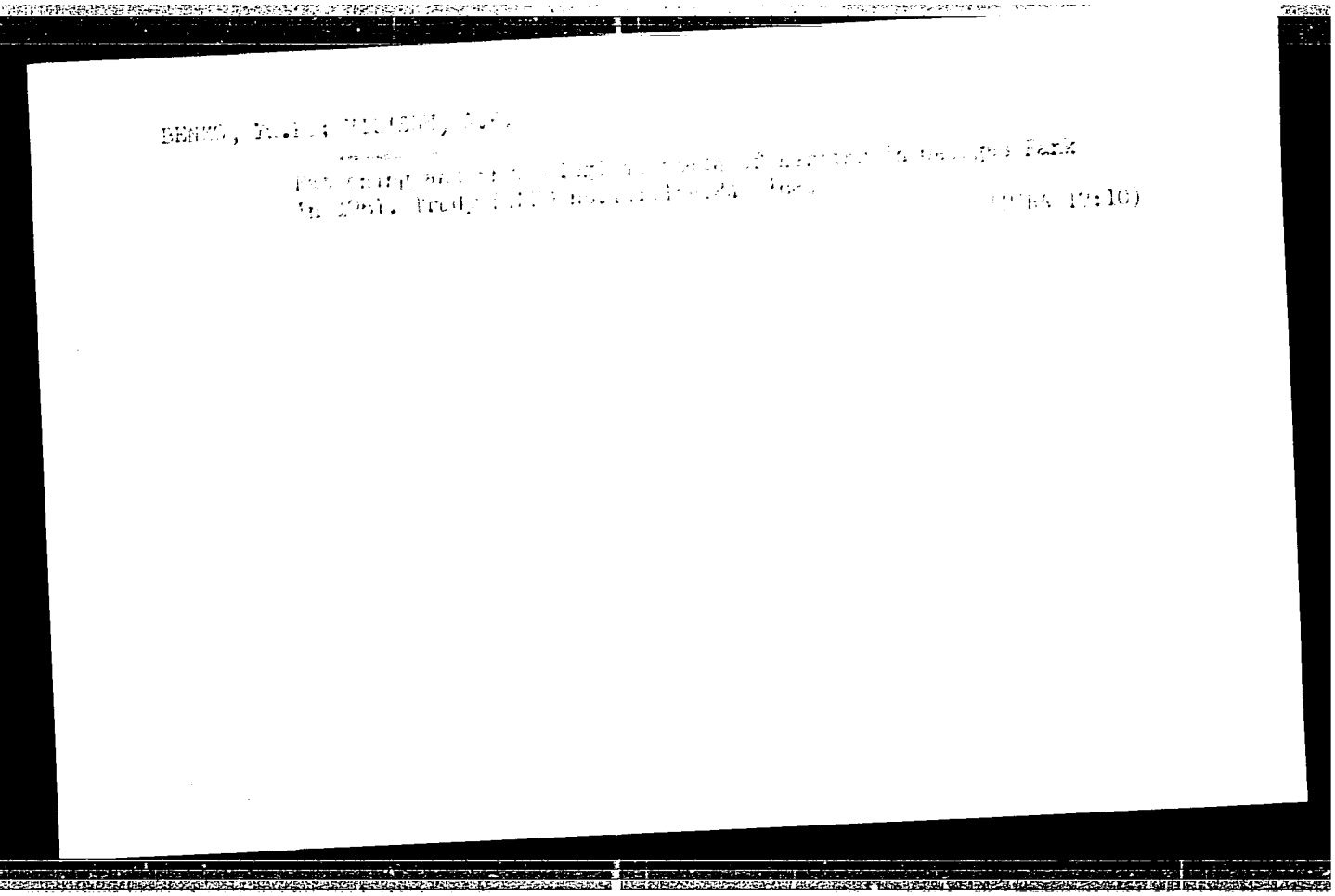
7. Determination of crystal symmetry by x-ray analysis. Zhur. fiz. khim. 26, no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

VIL'SON, A.P.

Biology and fisheries of herring in Kandalaksha Bay. Mat. po kompl. izuch.Bel.mor. no.1:90-104 '57. (MLRA 10:8)

1.Polyarnyy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.
(Kandalaksha Bay--Herring fisheries)



RASIN',P.[Rasins, Pauls Paula d.]; VILSON, A.V.[Vilsons, Aleksandr Vilhelma d.]; MACEYEVSKA,Ye. [Macejevska,E.], red.; DARZINA,V., tekhn. red.

[Tapping trees] Atsvekosana. Riga Latvijas Valsts izdevnieciba, 1960. 250 p. [In Latvian] (MIRA 14:12)
(Turpentining)

VILSONS, A.

Methodological aspect of J.Jansons-Braun's articles of literary criticism. Vestis Latv ak SSR no.8:45-54 '62.

1. Latvijas PSR Zinatnu akademijas Valodas un literaturas instituts.

VILSONS, A.

A life devoted to the friendship of peoples and development of culture; on the 75th birthday of K.Egle, outstanding worker in the field of culture. Vestis Latv ak SSR no.8: 137-140 '62.

VILSONS, A.

The oldest Latvian scientific library. Vestis Latv ak no.11:157-160 '60. (KRAI 10:9)

(Latvia--Science)

1. VILSONS, A.

2. USSR (600)

4. Blaumanis, Rudolfs, 1862-1908

7. Blaumanis' artful mastery. Latv. PSR Zin. Akad Vestis 4, 1951

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

VIL'TSBAKH, K. Ye.

USSR/ Physical Chemistry - General Problems on Isotope Chemistry B-7

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7419

Author : Braun, V.G., Kaplan, L., Van Dyken, A.R., and Vil'tsbakh, K.Ye.

Inst : Academy of Sciences USSR

Title : Tritium as a Tool in Industrial and Chemical Research

Orig Pub : Sb. Primeneniye radioaktivnykh izotopov v prom-sti, meditsine i s. kh. [Symposium on the Application of Radioactive Isotopes in Industry, Medicine, and Agriculture], Izd-vo AN SSSR, Moscow, 1956, 94-112

Abstract : Tritium has a number of advantages over D and C^{14} as a tracer: a higher activity, ease of introduction into molecules, low cost. Its drawback consists in the radioactive decomposition of tritium-tagged compounds. For purposes of analysis the compounds containing T are converted to a mixture of CH_4 and H_2, the activity of which is measured in an ionization chamber. The tritium-tagged

Card 1/2 - 72 -

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7419

compounds are prepared by reduction with the hydrides of Li-B, Li-Al, and Na-B, which contain T. Another method consists in the neutron irradiation of the respective compounds in the presence of the lithium salt. The tritium formed by the $Li^6(n, \alpha)$reaction enters the organic molecules. Data are presented on the activating effect of various groups, maximum specific activities, etc. Tritium-tagged methyl groups were used in the methylation of hydrocarbons for the purpose of investigating their structure. A series of data are presented on the fractionation of the T and H isotopes by partition chromatography and on the effect of the isotope composition of hydrogen on the rate of some reactions.

VIL'TSEV, P.P., inzhener.

Electronic vectorscope. Elek.sta.27 no.12:53-54 D '56.
(MLRA 10:1)
(Electronic instruments)

SAKHAROVA, M.M., kand. med. nauk; VIL'TSING, M.R.

Congenital and juvenile glaucoma according to data collected for 6 years at the ophthalmological department of the Republic Hospital of the Chechen-Ingush A.S.S.R. Sbor. nauch. trud. SOGMI no.14:87-90 '63. (MIRA 18:9)

1. Glaznoye otdeleniye Respublikanskoy bol'nitsy Checheno-Ingushskoy ASSR, Groznyy.

L 11125-66 EWT(1)/T LJP(c)
ACC NR: AP6000884 SOURCE CODE: UR/0181/65/007/012/3673/3676

AUTHORS: Vilu, R. O.; Elango, M. A.

ORG: Institute of Physics and Astronomy AN ESSR, Tartu (Institut fiziki i astronomii AN ESSR)

TITLE: On the role of hole processes in the creation of F centers in ionic crystals during the initial stage of radiative coloring

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3673-3676

TOPIC TAGS: color center, F band, light absorption, ionic crystal, hole mobility

ABSTRACT: The authors have made a detailed investigation of the temperature dependence of the efficiency with which F centers are produced by x rays in NaCl, KCl, KBr, and KI during the first stage of radiative coloring, in the temperature interval from 80 to 450K, which covers the region of autolocalization of the holes (100--250K)

Card 1/3

L 14125-66
ACC NR: AP6000884

and of intense ionic processes in crystals (300--400K). The crystals were grown from the melt by the Kiropoulos method. All were of equal thickness (0.75 ± 0.10 mm) and were irradiated in a cryostat under identical conditions. The absorption was measured automatically during the irradiation of the crystals at the wavelength corresponding to the maximum of the absorption F band. All crystals had an optimal temperature at which the efficiency of F-center production was a maximum. This temperature decreased in the sequence NaCl--KCl--KBr--KI, and agreed well with the temperature at which intense autolocalization of the holes in the crystal lattice took place. At the optimal temperature, the F centers were produced more effectively in NaCl and KCl than in KBr and KI. This difference is connected with the difference in the relative efficiency of generation of electron-hole pairs and excitons in the different ionic crystals. The authors also measured the thermoluminescence of the crystals after x-irradiation at 80K for five minutes, and the temperature dependence of the x-ray luminescence as the crystals were cooled from room temperature. Two thermoluminescence peaks were observed in the region of steep decrease of the F-center efficiency, due most probably to the release

Card 2/3

L 14125-66
ACC NR: AP6000884

of the autolocalized holes. The results show that during the initial stage of the radiative coloring the F centers are produced essentially via the electron-hole mechanism; the efficiency of which is determined in many respects by the conditions for localization of the holes and the different points of the crystal lattice. Authors are grateful to Ch. B. Lushchik for a discussion of the material. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 08Jul65/ ORIG REF: 006/ OTH REF: 005

Card 3/3

SMIRNOVA, Muza Konstantinovna; SOKOLOV, Boris Pavlovich; SIDORIN, Yakov Sergeyevich; IVANOV, Aleksey Pavlovich; VILUNAS, V.F., inzh., retsenzent; KUSKOVA, A.I., red.

[Hull strength of a fiberglass boat] Prochnost' korpusa sudna iz stekloplastika. Pod obshchei red. M.K.Smirnova. Leningrad, Sudostroenie, 1965. 331 p. (MIRA 19:1)

MUN, A.[illegible]; [illegible], Yu.E.

Distribution of lithium in lake deposits of silt. Izv. AN Kazakh. SSR.Ser.khim.nauk 15 no.2:25-32 Ap-Jo '65. (MIRA 18:9)

SOV/124-58-10-11471

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 110 (USSR)

AUTHORS: Vergun, P.I., Vilutis, A.F., Ivanov, V.N., Pereverzev, A.A., Petryagin, I.N., Yanyukhin, G.F.

TITLE: Calculations of Critical Loads and Frequencies of Natural Vibrations of Parabolic Arches (Vychisleniye kriticheskikh nagruzok i chastot sobstvennykh kolebaniy parabolicheskikh arok)

PERIODICAL: Sb. stud. nauchn. rabot. Altaysk. s.-kh. in-t, 1957, Nr 6, pp 89-98

ABSTRACT: Bibliographic entry

Card 1/1

POGODAYEV, K.N.; VILUTIS, E.S.

Temperature dependence of the X-ray luminescence and dark conductivity of diamonds of the Yakutsk deposit. Izv.AN SSSR. Ser. fiz. 25 no.3: 373-375 Mr '61. (MIRA 14:2)

1. Irkutskiy gosudarstvennyy universitet imeni A.A. Zhdanova.
(Diamond crystals--Electric properties)

S/048/61/025/003/024/047
B104/B214

AUTHORS: Pogodayev, K. N. and Vilutis, E. S.

TITLE: Temperature dependence of X-ray luminescence, and dark conductivity of diamonds from the Yakutsk deposits

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 373-375

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. The crystals studied were divided into two groups from the crystallographic point of view. The first group consisted of perfect double spinels, and the second group of imperfect depressed double spinels. The electric dark current was measured by a tube electrometer during heating at a rate of 0.48°C/sec in the temperature range of 50-350°C. From Fig. 1 it is seen that the electrical conductivity changes exponentially above 220°C, and from the slope of the straight line log $\sigma = f(1/T)$, the values of the activation energies of the carriers were determined to be between 2.05 and 2.82 ev. The two groups are seen from Fig. 1 to have a maximum

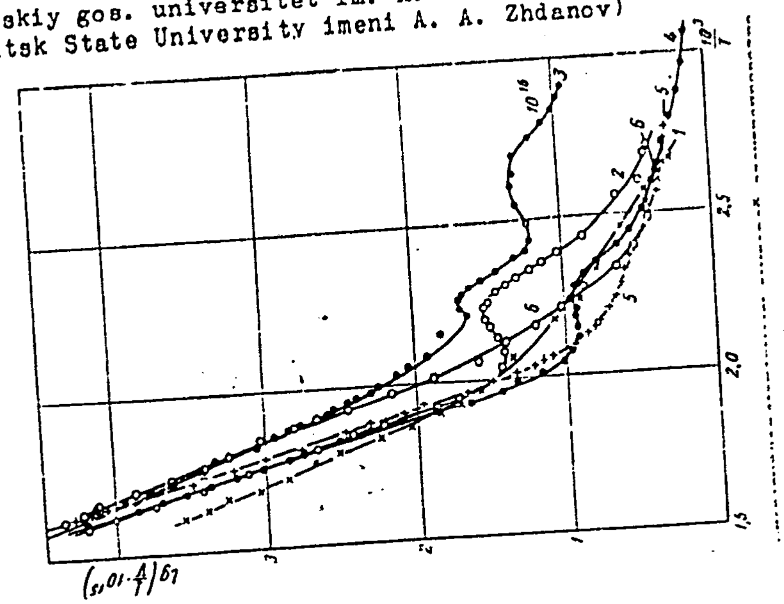
Card 1/4

at 180°C; the second group has an additional maximum at 110°C. All maxima disappear on heating over 350°C. It is assumed that the second group has more lattice defects than the first; luminescence is also stronger on exposure to X-rays. The activation energies of the carriers of the first group are 1.44 and in the range of 2.64-3.07 ev; those of the second group are 0.96, 1.40 and in the range 2.27-278 ev. When the diamonds were irradiated with radioactive Tl^{204}, the electrical conductivity decreased with an increase in the dose (Curves 4 and 5), and after a heat treatment, it reached again the initial level (Curve 6). This means n-type conductivity of the diamonds at low temperatures. From a study of the dependence of the blue and orange luminescence bands on the intensity of radiation and the thermal de-excitation, the conclusion is drawn that the diamonds of the second group possess two kinds of luminescence centers with two trapping levels each. The activation energies determined from the curves of thermal de-excitation are: 0.42 and 0.64 ev for the blue bands, and 0.36 and 0.80 ev for the orange bands. From these values it is concluded that the two trapping levels lie 0.96 and 1.40 ev below the conduction band. There are 1 figure and 7 references: 1 Soviet-bloc and 5 non-Soviet-bloc.

Temperature dependence of X-ray...

S/048/61/025/003/024/047
B104/B214

ASSOCIATION: Irkutskiy gos. universitet im. A. A. Zhdanova (Irkutsk State University imeni A. A. Zhdanov)



Card 3/4

Legend to Fig. 1: Temperature dependence of the dark conductivity of diamonds. 1) Unexcited diamond. 2) X-rayed diamond of the first group. 3) X-rayed diamond of the second group (scale magnified 10 times). 4) Diamonds of the first group X-rayed for 24 hours. 5) Diamonds of the first group X-rayed for 1,000 hours. 6) The same after annealing at 350°C.

Card 4/4

L 59204-65 EWT(1)/EWT(m)/EWP(t) [illegible]

ACCESSION NR: [illegible]

SOURCE: Ref. zh. Fizika, Abs. 6D582

AUTHOR: Vilutis, E. S.

TITLE: Thermoluminescence of Ural and Yakutsk diamonds excited with x-rays

CITED SOURCE: Sb. Kratkiye soobshch. o nauchno-issled. rabotakh za 19[illegible] g. Irkutskiy un-t. Irkutsk, 1963, 46-47

TOPIC TAGS: diamond, thermoluminescence, x irradiation

TRANSLATION: The author investigated the thermoluminescence spectra of x-irradiated diamonds. Two bands were observed, blue and orange. The thermoluminescence curves have maxima at temperatures 90 and 240C (activation energy 0.42 and 0.64 eV, respectively) in the blue band of radiation, and at 9[illegible] and [illegible] eV in the orange band. [illegible]
M. Elango

SUB CODE: OP, MT ENCL: 00

Card 1/1

VIIUTIS, E.S.; PENTINA, E.E.

Excitation and emission spectra of Yakut diamonds. Opt. i spektr. 18 no.3:446-449 Mr '65. (MIRA 18:5)

L 13099-63 EWT(1)/EWP(q)/EWT(m)/BDS AFFTC/ASD WH/JD

ACCESSION NR: AP3003413 S/0051/63/015/001/0079/0082

AUTHOR: Vilutis, E.S.; Krongauz, V.G.

TITLE: Temperature quenching of the luminescence of Siberian diamonds

SOURCE: Optika i spektroskopiya, v.15, no.1, 1963, 79-82

TOPIC TAGS: luminescence quenching, diamond, light sun storage, luminescence mechanism

ABSTRACT: Investigation of temperature quenching of luminescence is of interest in that it helps understand the nature of the luminescence mechanism in crystal phosphors. Hitherto there have been few studies of temperature quenching of the luminescence of diamonds, and these have been concerned mainly with quenching of their photoluminescence. Moreover, the published data are often conflicting and contradictory. Accordingly, the authors studied quenching of the x-ray and photo stimulated luminescence of Siberian diamonds. The temperature dependence of the roentgenoluminescence was studied in the range from -196 to +200°. The emission was detected by means of an FEU-17 photomultiplier. Under x-ray excitation some diamonds store appreciable light sums at room temperature and glow-curve peaks appear at 90 and 240° (blue) and 80 and 280° (yellow). Some specimens also exhibit glow-curve peaks at low temperatures. On the other hand, some specimens (mainly spinel twins) do not store light sums. Luminescence versus temperature curves for

Card 1/2

L 13099-63

ACCESSION NR: AP3003413

storing and non-storing diamond specimens are shown; the curves indicate strong quenching. Under x-ray stimulation the emission drops to zero at 160-180°. Quenching is also observed in the case of photostimulation (filtered UV from a mercury discharge tube), but in this case the temperature of intense weakening is higher (250 to 400°) and complete suppression is not observed even at 500°. Interpretation of the experimental results is hampered by lack of a clear understanding of the mechanism of luminescence in diamonds. The possible mechanisms of light sum storage are discussed; it is suggested that in diamonds storage may occur without creation of free electrons and holes. The authors conclude that the differences as regards temperature variation of the luminescence brightness observed for different diamond specimens and under different forms of excitation may be explained by the fact that there occur in diamonds different processes leading to emission and quenching of luminescence. Orig.art.has: 1 figure.

ASSOCIATION: none

SUBMITTED: 23Jul62 DATE ACQ: 30Jul63 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 004

Card 2/2

L 06256-67 EWT(l)/EWP(e)/EWT(m) IJP(c) WH

ACC NR: AP6031962 SOURCE CODE: UR/0051/66/021/003/0384/0386

AUTHOR: Krongauz, V. G.; Vilutis, E. S.

ORG: none

TITLE: Photostimulated luminescence of diamonds excited with x rays

SOURCE: Optika i spektroskopiya, v. 21, no. 3, 1966, 384-386

TOPIC TAGS: luminescence center, thermoluminescence, diamond, x ray irradiation

ABSTRACT: Considering that the study of photostimulated luminescence is of major importance for determining the mechanism of luminescence in general, the authors investigated this phenomenon by taking partially transparent diamonds from the Yakutsk deposit. The specimens, which emit a blue glow, were excited for 20-100 min with x rays from a BSV-2Mo tube (10 mA, 45 kV) at room temperature. The stimulating illumination was separated by means of a UM-2 monochromator, and the light source was a 400 W tungsten lamp. The stimulation spectrum of blue radiation, measured in the 520-1100 nm range, showed a peak at λ = 560 nm. Analysis of the temperature dependence of the brightness of photostimulated luminescence (measured with light impulses with λ = 600 nm) showed this brightness to remain constant in the 239-480°K range, and its decrease to be associated with a thermoluminescence peak having T_{m2} = 516°K. At the latter temperature, at which nearly one-half of the light sum liberated at this peak is emitted, the brightness of the photostimulated luminescence decreases by a factor of

Card 1/2 UDC: 539.37:539.12.04:546.26-162

ACC NR: AP6031962

two. These facts show that photostimulated luminescence is due to the emptying of levels (called C-levels) responsible for the high-temperature peak of thermoluminescence. It was found also that the optical de-excitation of C-centers is associated not only with the luminescence of 415-centers, but also with the filling of levels shallower than C levels. Measurements performed by K. N. Pogodayev and V. S. Tatarinov in the authors' laboratory showed that x-ray irradiation of the diamonds studied caused an increase in photoconductivity, especially at 500-600 nm. It is concluded that in x-irradiated diamonds with a typical blue luminescence, the light energy generated during optical de-excitation is stored in deep local levels (C-levels). Thermal liberation of charges from these levels gives rise to the thermoluminescence peak with $T_{m2} = 516°K$. The C-traps are spatially separated from the luminescence centers, and the blue luminescence resulting from the liberation of charges from C-centers is recombinational in character. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 22Jul65/ ORIG REF: 010/ OTH REF: 003

V. Kuts, N. I.

AUTHORS: Reshetnikov, N. A., Vilutis, N. I. 78-2-18/43

TITLE: I. The Fusion Diagrams of Some Double Systems of Hydroxides and Salts of the Alkali Metals (I. Diagrammy plavkosti nekotorykh dvoynykh sistem iz gidrookisey i soley shchelochnykh metallov)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 2, pp. 366-377 (USSR)

ABSTRACT: The authors treated the problem of the formation of complexes (no difference is made between complex-formation and double salts) between hydroxides and salts of the alkali metals in an anhydrous system. Ions which have a high polarizing effect and possess a small ionic radius show a tendency to complex--formation in double systems with general cations and various anions. The anions F', OH' and O^{2-} show a tendency to complex--formation, as they have a higher polarizing effect. The cations with a higher polarizing effect also favorably influence the complex-formation. In this work the melts of the above-mentioned systems were investigated by simple and by differential analysis. The following thermographic investigations were performed: 1. The system $KOH-KNO_3$. In this system the chemical

Card 1/2

compound $KOH.KNO_3$ which possesses a melting point of 236° C was determined from the fusion diagram. The formation of solid solutions is not out of the question either. 2. NaOH-$NaNO_2$. In this system the chemical compound $NaOH.NaNO_2$ with a melting point at 266° C was determined from the fusion diagram. The formation of solid solutions was not discovered in this system. The values for the temperature of the polymorphous transformation of sodium hydroxide /300° C/ and sodium nitrite /160° C/ correspond to the values given in publications. 3. The system K_2OH_2-K_2CrO_4. In this system the formation of compounds of the following composition is not impossible: $KOH.K_2CrO_4$, $KOH.2K_2CrO_4$, $2KOH.3K_2CrO_4$. 4. The system NaOH-KNO_3. The formation of solid solutions was determined from the fusion diagram of this system. This may probably be explained by the fact that large parts of the crystal-structure of one component are replaced by the second component. There are 6 figures, 6 tables, and 33 references, 16 of which are Slavic.

SUBMITTED: February 20, 1957
AVAILABLE: Library of Congress
Card 2/2

5(4) SOV/78-4-1-24/48

AUTHORS: Reshetnikov, N. A., Vilutis, N. I.

TITLE: The Ternary System of Hydroxides of Lithium, Sodium, and Potassium (Troynaya sistema iz gidrookisey litiya, natriya i kaliya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 123-131 (USSR)

ABSTRACT: The binary systems NaOH-KOH, LiOH-KOH, and LiOH-NaOH were investigated and partly improved. The system LiOH-KOH was investigated for the first time and it was found that the addition of lithium ions to the binary system often causes complex formation. An incongruent melting compound 2LiOH.KOH was found in the system. The system LiOH-NaOH is the most complex of the three systems. Limited solid solutions appear on the side of LiOH and KOH. Two chemical compounds are formed: α-NaOH.3LiOH and NaOH.LiOH. The phase diagram of the system Li, Na, K || OH was plotted. Double compounds occur in the system. Polymorphous changes of the components take place and phase X appears which probably is a ternary compound. Nine ranges of crystallization can be seen on the diagram:

Card 1/2

The Ternary System of Hydroxides of Lithium, Sodium, and Potassium

1) α-NaOH, 2) β-NaOH, 3) α-KOH, 4) β-KOH, 5) LiOH, 6) 3LiOH.KOH, 7) α-3LiOH.NaOH, 8) β-3LiOH.NaOH, 9) phase X. Addition of lithium hydroxide to melts of potassium and sodium hydroxide causes the melting temperature of the melts to drop very slightly. There are 4 figures, 6 tables, and 8 references, 6 of which are Soviet.

SUBMITTED: July 24, 1957

Card 2/2

VILUTIS, N.I.; REBHETNIKOV, N.A.

Reaction between sodium and lithium hydroxides and bromides in the absence of a solvent. Izv.Sib.otd.AN SSSR no.9:88-100 '60.
(MIRA 13:11)

1. Irkutskiy meditsinskiy institut.
(Sodium compounds) (Lithium compounds)

RESHETNIKOV, N.A.; VILUTIS, N.I.

Fusibility diagrams in the systems LiOH - $NaNO_3$ and LiOH - KNO_3.
Zhur.neorg.khim. 6 no.6:1397-1400 Je '61. (MIRA 14:11)
(Systems (Chemistry))

AUTHOR

S/029/62/000/009/002/002
D037/D113

13,2520

AUTHORS: Bel'kevich, V.; Vende, E.; Vil'-Vil'yams, I., Co-workers

TITLE: The engineering art of nature

PERIODICAL: Tekhnika molodezhi, no. 9, 1962, 37-38

TEXT: The application of knowledge of biological processes to the solution of engineering problems is described. A recently developed small highly sensitive accelerometer is cited as an example of applied bionics. This device, based on the action of the human vestibular apparatus, is important for measuring the acceleration of self-guiding missiles and consists of 2 glass vessels into each of which one electrode is soldered. The vessels are connected and filled with an electrolyte. The electrodes are connected to an a.c. bridge circuit. The slightest acceleration moves the electrolyte levels and unbalances the bridge. The signal thus obtained is used for correcting the flight of a rocket. There are 4 figures.

Card 1/2

S/020/62/000/009/002/002
The engineering art of nature D037/D113

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya (All-Union Scientific Research Institute of Medical Instruments and Equipment)

Card 2/2

BEL'KEVICH, V.; VENDE, E.; VIL'-VIL'YAMS, I.

Nature's engineering arts. Tekh.mol. 30 no.9:37-38 '62.
(MIRA 15:9)

1. Sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta meditsinskikh instrumentov i oborudovaniya.
(Cybernetics)
(Animal mechanics)

ABRUDAN, V., ing.; CIOBANU, M., ing.; PETRESCU, Gh., ing.; VILVOI, V.; IONESCU, C., ing.; KESTENBAUM, S.; FORRAI, St., ing.; FUCIU, Martian; NILA, Vasile, ing.; AROMINESEI, Alexandru; MORARU, Nicolae, ing.; BOGHICI, A.; SIMIONESCU, M.

Reduction of specific consumptions of metal. Probleme econ 17 no.12:137-141 D '64.

1. Technical Director, Arad Plant of Railroad Cars (for Abrudan). 2. Chief Technologist, Arad Plant of Railroad Cars (for Ciobanu). 3. Technical Director, "1 Mai" Plant, Ploiesti (for Petrescu). 4. Chief Planning Engineer, "1 Mai" Plant, Ploiesti (for Vilvoi). 5. Director, "Infratirea" Machine Tool Plant, Oradea (for Ionescu). 6. Assistent Chief Engineer, "Infratirea" Machine Tool Plant, Oradea (for Kestenbaum). 7. Chief Technologist, "Infratirea" Machine Tool Plant, Oradea (for Forrai). 8. Director, Arad Plant of Lathes (for Fuciu). 9. Chief Technologist, Arad Plant of Lathes (for Nila). 10. Chief Engineer, Arad Plant of Lathes (for Arominesei). 11. Technical Director, "Independenta" Plant, Sibiu (for Moraru). 12. Director, Sinaia Mechanical Plant (for Boghici). 13. Chief Engineer, Sinaia Mechanical Plant (for Simionescu).

NATALUKHA, Ya.M., veterinarnyy vrach; VIL'TOVSKIY, G.B., veterinarnyy vrach.

Extermination of hog cholera directly at the focuses of acute infection. Veterinariia 38 no.3:22-26 Mr '61 (MIRA 18:1)

VIL'VOVSKIY, G. B. and NATALUKHA, Ya. M. (Veterinary Surgeons)

"Eradication of hog cholera directly in the foci of acute infection."

Veterinariya, Vol. 38, No. 3, 1961, p. 22.

VIL'VOVSKIY, L.Ya.

Twin vibration screens. TSvet. met. 30 no.4:75-76 Ap '57. (MIRA 10:6)
(Screens (Mining))

136-4-16/23

AUTHOR: Vil'vovskiy, L.Ya.

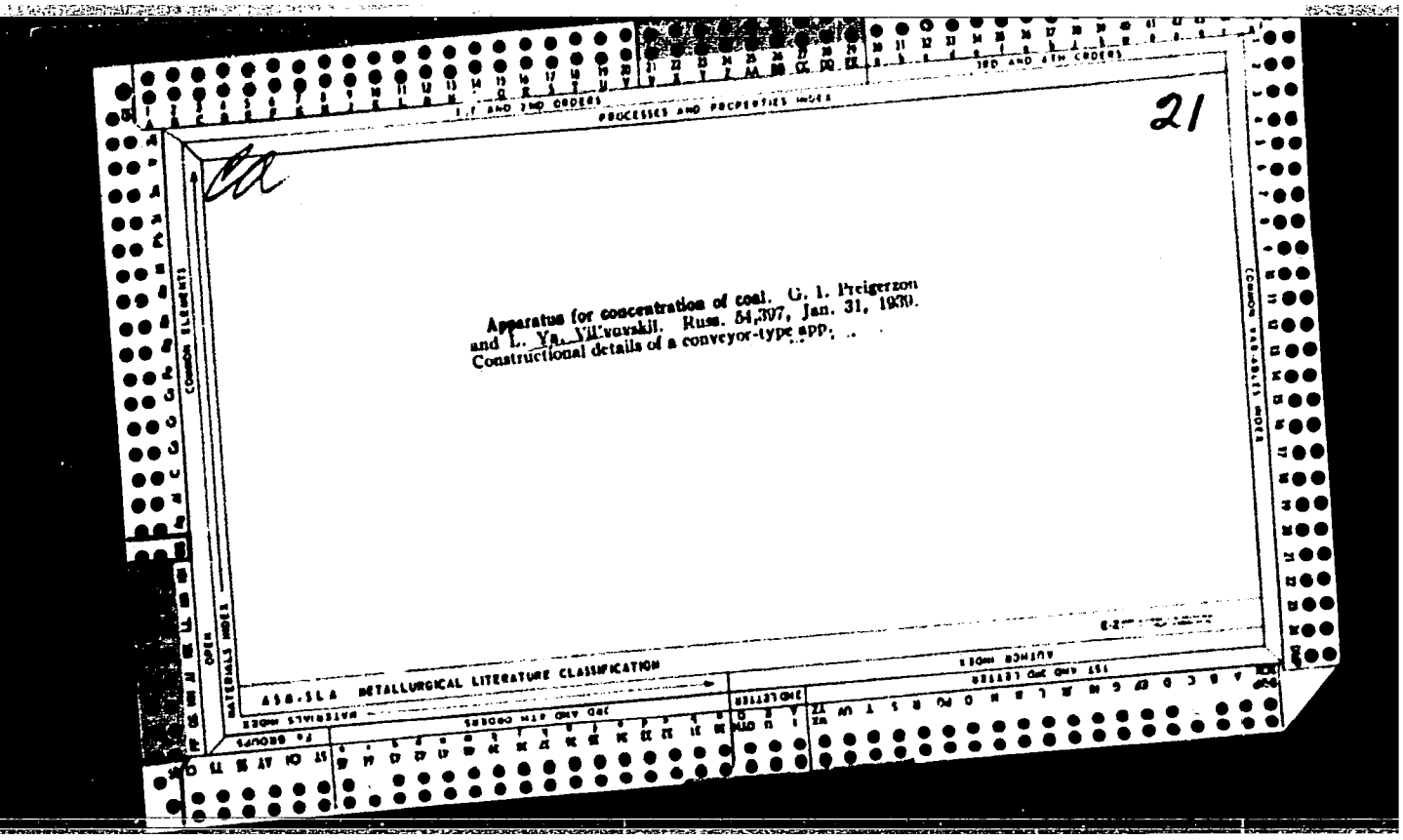
TITLE: A twin vibrating screening machine. (Sdvoennyy vibratsionnyy grokhot.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No.4, pp. 75 - 76 (U.S.S.R.)

ABSTRACT: The construction is described and illustrated of a screening machine devised by the author for medium and fine screening. The three screen sizes are arranged in pairs. The screens are inclined and the machine is caused to vibrate by a single mechanism producing elliptical-type vibrations at a frequency of 1 000 - 1 500 per min. Other types of vibration can be produced by changing the mechanism. The material is led from screen to screen by troughs so arranged that the full surface of each screen is utilized. Further advantages of the new design are its compactness and its economical use of screens. The machine has been tested at the Nesvetaevskaya Central Beneficiation Works (Nesvetaevskaya TsOF) for screening anthracite and gave good results. The author recommends the use of the same principle for wet screening.

Card 1/1

AVAILABLE:



VILYAMOVSKAYA, M.I.

Capillaroscopical method for studying the skin cover of the human hand. Biul.MOIP.Otd.biol. 67 no.5:151-152 S-O '62. (MIRA 15:10)

(CAPILLARIES) (SKIN)

VILYAMOVSKAYA, M.I.

Significance of palmoscopy for medicolegal and criminalistic practice. Sud.-med. ekspert. 4 no. 1:48-53 Ja-Mr '61. (MIRA 14:4)

1. Gosudarstvennyy institut usovershenstvovaniya vrachey imeni S.M. Kirova (dir. - prof. N.I. B.inov).
(IDENTIFICATION) (DERMATOGLYPHICS)

VILYAMOVSKAYA, M. I.

VILYAMOVSKAYA, M. I. --"The Felxion Sulci of the Wrist and Foot of Man, Their Development, Age Changes, and Comparison with the Sulci of Primates." Moscow, 1956. (Dissertation for the Degree of Candidate in Biological Sciences.)

So.: Knizhnaya Litopis', No 7, 1956.

IVANOV, K.I.; VILYANSKAYA, Ye.D.

Reversal of the negative catalytic effect of aniline in the course of its action upon the various stages of hydrocarbon. Zhur.fiz. khim. 35 no.1:50-57 Ja '61. (MIRA 14:2)

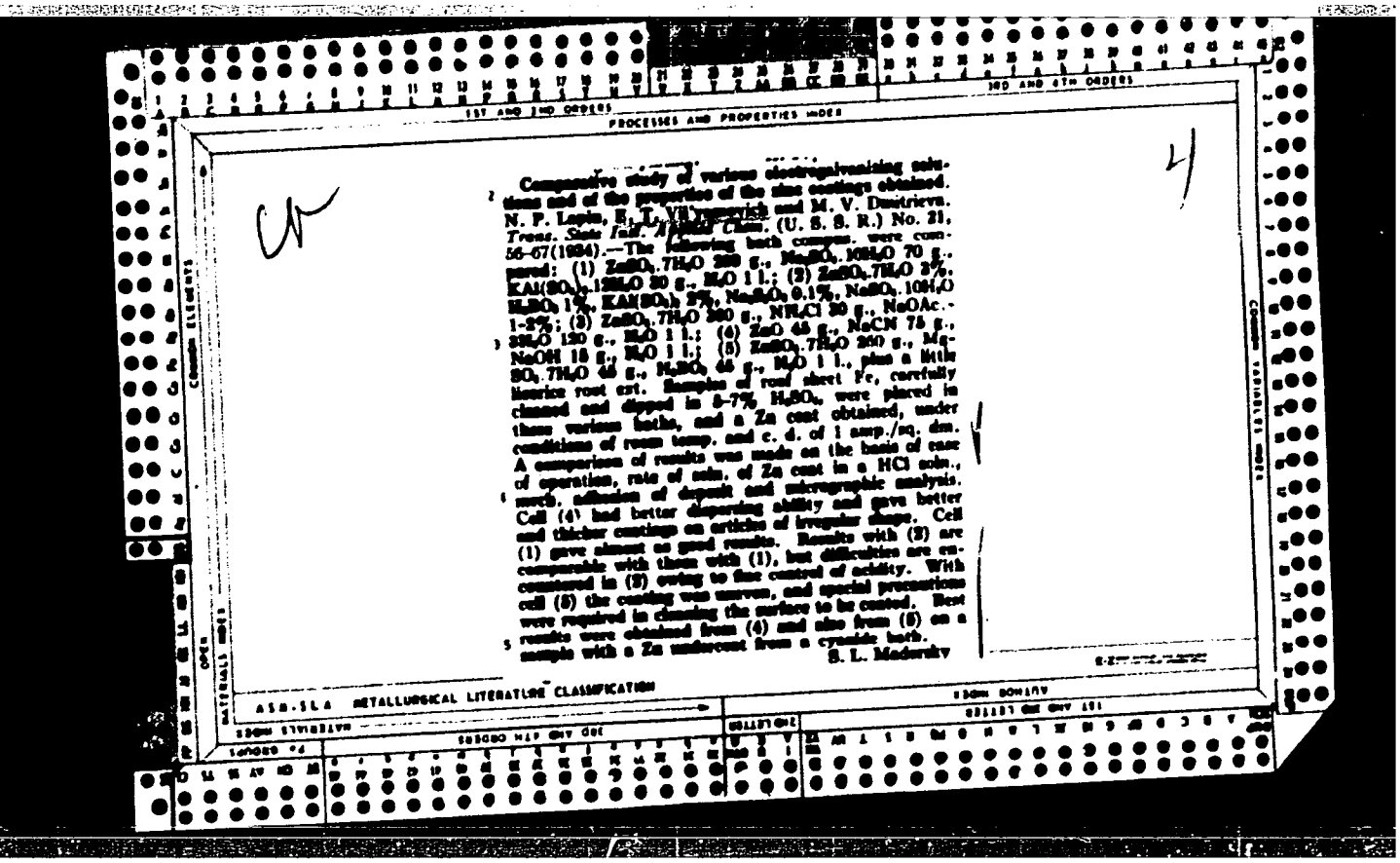
1. Vsesoyuznyy tepoltekhnicheskiy institut im. F.E. Dzerzhinskogo. (Aniline) (Hydrocarbons) (Oxidation)

VILYAMOVSKIY, T.S. , Syzran' Kuibyshevskaia obl.Proletarskii, per.d.41.

Pincers for exposure of the intestine in appendectomy. Vest. khir. 75 no.5:129 Je '55. (MLRA 8:10)

1. Is.l-y gorodskoy bol'nitsy g.Syzrani.
(APPENDIX, surgery,
pincers for exposure of intestine)

VILYAMOVICH, E.
A. O. SKIRSTIMONSKII, Trans. State Inst. Applied Chem. (USSR)
No. 19, 86-95, 1934



PROCESSES AND PROPERTIES INDEX

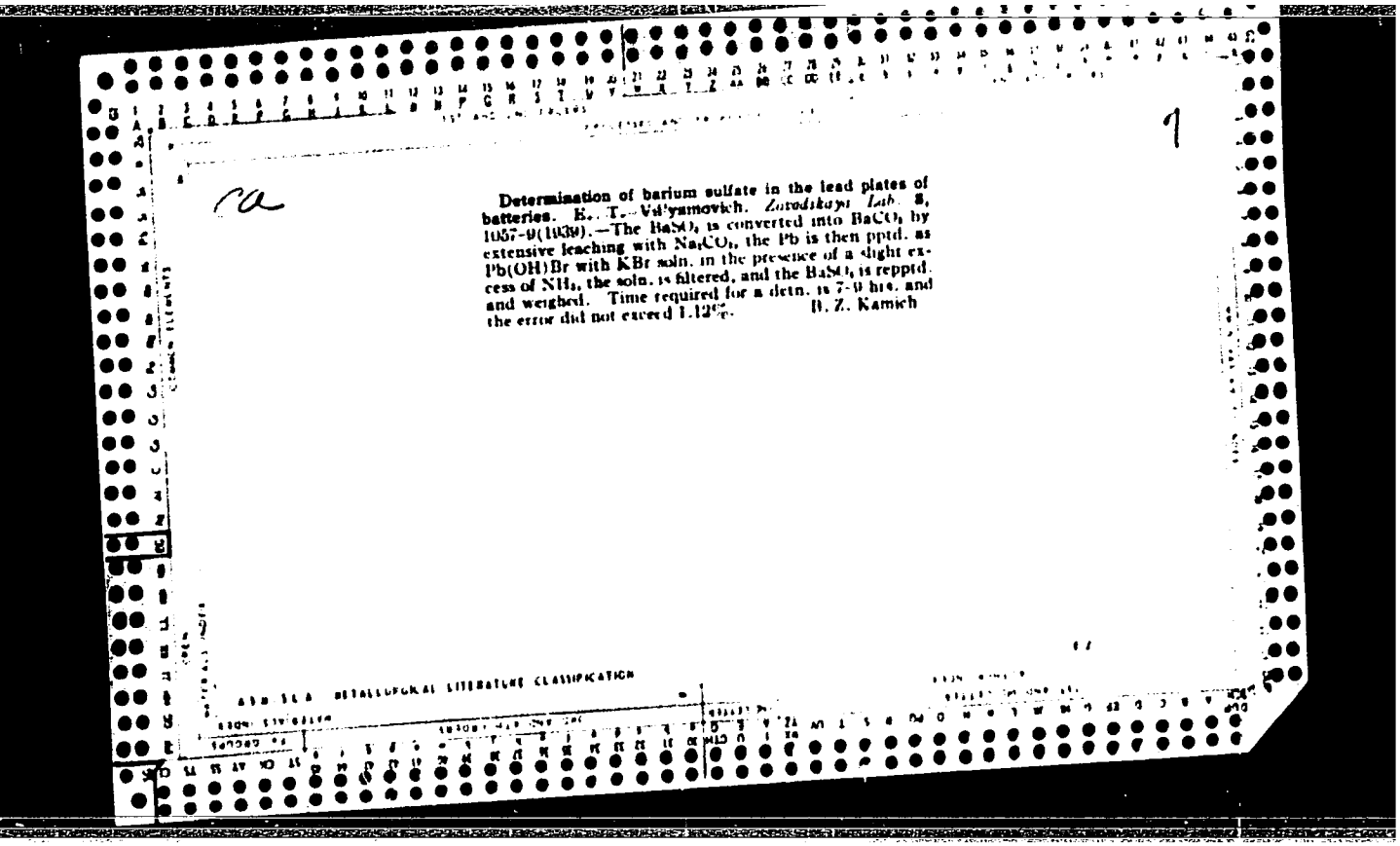
1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

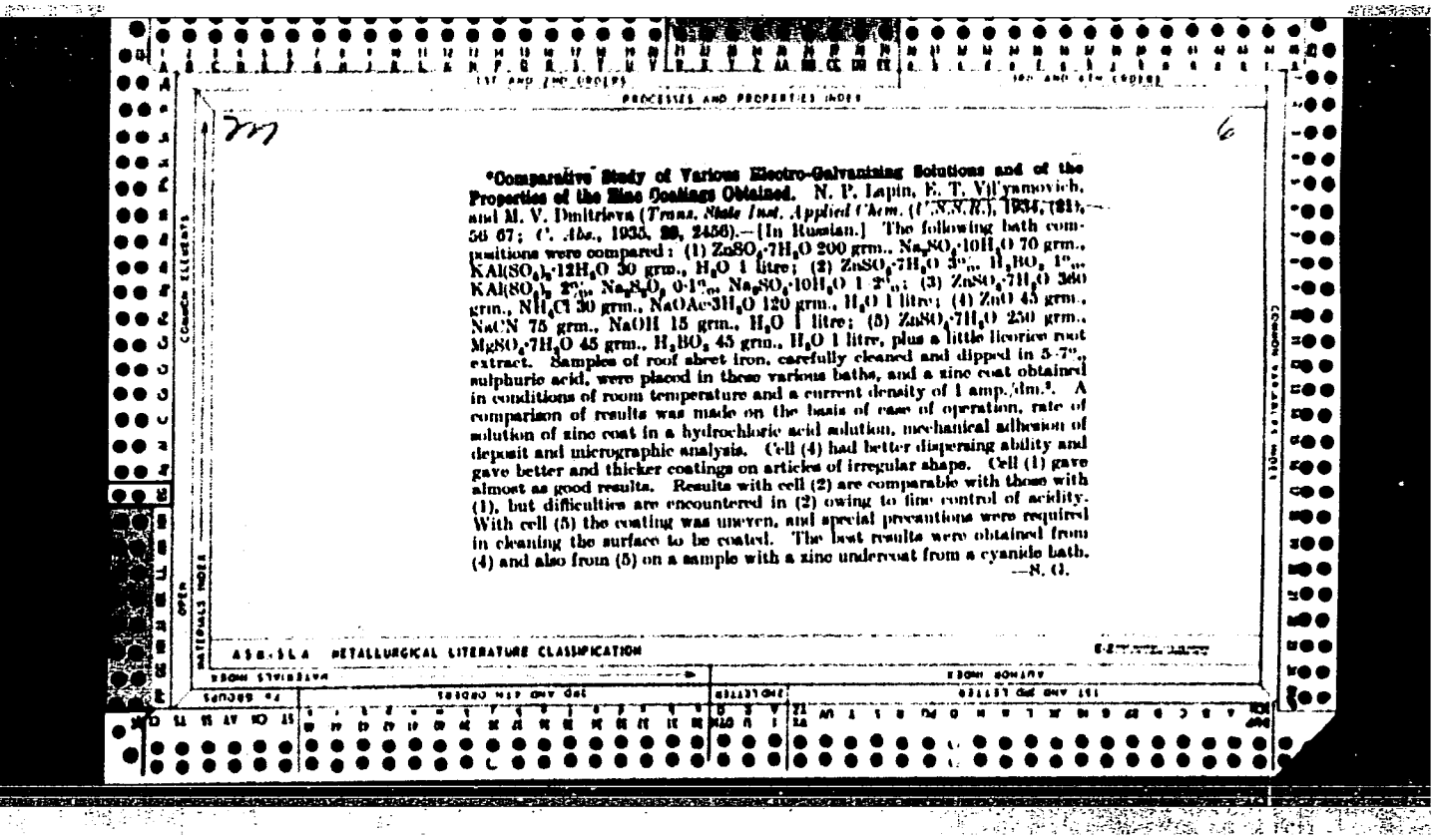
Comparative study of various electrogalvanizing solutions and of the properties of the zinc coatings obtained. N. P. Lapin, E. L. Vil'yanovich and M. V. Dmitrieva. *Trans. State Inst. Applied Chem.* (U. S. S. R.) No. 21, 56-67(1934).—The following bath compns. were compared: (1) $ZnSO_4.7H_2O$ 200 g., $Na_2SO_4.10H_2O$ 70 g., $KAl(SO_4)_2.12H_2O$ 30 g., H_2O 1 l.; (2) $ZnSO_4.7H_2O$ 3%, H_3BO_3 1%, $KAl(SO_4)_2$ 2%, Na_2SO_4 0.1%, $Na_2SO_4.10H_2O$ 1-2%; (3) $ZnSO_4.7H_2O$ 260 g., NH_4Cl 30 g., NaOAc.-$3H_2O$ 120 g., H_2O 1 l.; (4) ZnO 45 g., NaCN 75 g., NaOH 18 g., H_2O 1 l.; (5) $ZnSO_4.7H_2O$ 260 g., $MgSO_4.7H_2O$ 45 g., H_3BO_3 45 g., H_2O 1 l., plus a little licorice root ext. Samples of roof sheet Fe, carefully cleaned and dipped in 5-7% H_2SO_4, were placed in these various baths, and a Zn coat obtained, under conditions of room temp. and c. d. of 1 amp./sq. dm. A comparison of results was made on the basis of ease of operation, rate of coln. of Zn coat in a HCl soln., smoothness, adhesion of deposit and micrographic analysis. Cell (4) had better dispersing ability and gave better and thicker coatings on articles of irregular shape. Cell (1) gave almost as good results. Results with (2) are comparable with those with (1), but difficulties are encountered in (3) owing to fine control of acidity. With cell (5) the coating was uneven, and special precautions were required in cleaning the surface to be coated. Best results were obtained from (4) and also from (5) on a sample with a Zn undercoat from a cyanide bath.

S. L. Madorsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Determination of barium sulfate in the lead plates of batteries. E. T. Val'yanovich. *Zavodskaya Lab.* 8, 1057-9(1939).—The $BaSO_4$ is converted into $BaCO_3$ by extensive leaching with Na_2CO_3, the Pb is then pptd. as $Pb(OH)Br$ with KBr soln. in the presence of a slight excess of NH_3, the soln. is filtered, and the $BaSO_4$ is reppted. and weighed. Time required for a detn. is 7-9 hrs. and the error did not exceed 1.12%. B. Z. Kamich



PROCESSES AND PROPERTIES INDEX

***Comparative Study of Various Electro-Galvanising Solutions and of the Properties of the Zinc Coatings Obtained.** N. P. Lapin, E. T. Vil'yanovich, and M. V. Dmitrieva (*Trans. State Inst. Applied Chem.* (U.S.S.R.), 1934, (31), 56–67; *C. Abs.*, 1935, **29**, 2456).—[In Russian.] The following bath compositions were compared: (1) $ZnSO_4 \cdot 7H_2O$ 200 grm., $Na_2SO_4 \cdot 10H_2O$ 70 grm., $KAl(SO_4)_2 \cdot 12H_2O$ 30 grm., H_2O 1 litre; (2) $ZnSO_4 \cdot 7H_2O$ 3%, H_3BO_3 1%, $KAl(SO_4)_2$ 2%, $Na_2S_2O_3$ 0·1%, $Na_2SO_4 \cdot 10H_2O$ 1 2%; (3) $ZnSO_4 \cdot 7H_2O$ 360 grm., NH_4Cl 30 grm., $NaOAc \cdot 3H_2O$ 120 grm., H_2O 1 litre; (4) ZnO 45 grm., NaCN 75 grm., NaOH 15 grm., H_2O 1 litre; (5) $ZnSO_4 \cdot 7H_2O$ 250 grm., $MgSO_4 \cdot 7H_2O$ 45 grm., H_3BO_3 45 grm., H_2O 1 litre, plus a little liquorice root extract. Samples of roof sheet iron, carefully cleaned and dipped in 5–7%, sulphuric acid, were placed in these various baths, and a zinc coat obtained in conditions of room temperature and a current density of 1 amp./dm.^{2}. A comparison of results was made on the basis of ease of operation, rate of solution of zinc coat in a hydrochloric acid solution, mechanical adhesion of deposit and micrographic analysis. Cell (4) had better dispersing ability and gave better and thicker coatings on articles of irregular shape. Cell (1) gave almost as good results. Results with cell (2) are comparable with those with (1), but difficulties are encountered in (2) owing to fine control of acidity. With cell (5) the coating was uneven, and special precautions were required in cleaning the surface to be coated. The best results were obtained from (4) and also from (5) on a sample with a zinc undercoat from a cyanide bath.
—S. G.

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

VILYAMOVSKIY, T.S.

Treatment of heart injuries. Vest. khir. 94 no.2:97-98 F '65. (MIRA 18:5)

1. Iz Syzranskoy gorodskoy bol'nitsy No.1 (glavnyy vrach - Z.N. Skiba).

VILYAMOVSKIY, T.S. (Syzran', Kuybyshevskoy oblasti, Proletarskiy per., d.41)

Repeated resection of the stomach in perforating ulcer of the gastrointestinal anastomosis. Vest.khir. no.3:120-121 '62. (MIRA 15:3)

1. Iz khirurgicheskogo otdeleniya (zav. - T.S. Vilyamovskiy) 1-y Syzranskoy gorodskoy bol'nitsy (gl. vrach - Z.N. Skiba, nauchnyy rukovoditel' - prof. A.M. Aminev).
(PEPTIC ULCER) (STOMACH--SURGERY) (JEJUNUM--ULCERS)

VILYAMOVSKIY, T.S.

Case of interscapular-thoracic amputation because of an enormous shoulder tumor. Khirurgiia 35 no. 5:110-111 My '59. (MIRA 13:10)

1. Iz Gorodskoy bol'nitsy No. 1 Syzrani.
(SHOULDER GIRDLE--TUMORS) (AMPUTATION)

VILYAMOVSKY, T.S., (Syzran)

Priority in the description of cough stimulant in appendicitis. (MLRA 9:8)
Sov. med. 20 no.4:57 Ap '56.
(APPENDICITIS) (COUGH)

VILYAMOVSKIY, T.S. (Syzran')

Thoracic wounds penetrating into the abdominal cavity. Khirurgiia no.9:70 S '54. (MLRA 7:12)

(WOUNDS AND INJURIES,
thorax, penetrating into abdomen)
(THORAX, wounds and injuries,
penetrating into abdomen)
(ABDOMEN, wounds and injuries,
penetrating thoracic wds.)

VILYAMOVSKIY, T.S.

Abdominal purpura in clinical acute surgical diseases of the abdomen. (MLRA 7:5)
Khirurgiia no.2:30-32 F '54.

1. Iz gorodskoy khirurgicheskoy bol'nitsy (glavnyy vrach L.I.Mamayeva) i zheleznodorozhnoy terapevticheskoy bol'nitsy (glavnyy vrach A.T. Sul'dina). (Purpura (Pathology)) (Abdomen--Diseases)

26588 S/185/60/005/003/003/020
D274/D303

24,2300

AUTHORS: Afanas'yev, M.G., Gordiyenko, A.G., Kolisnychenko, L.K., Vil'yams, A.P. and Sydorendko, L.I.

TITLE: Measurement and stabilization of the magnetic field of a powerful electromagnet by the method of nuclear magnetic resonance

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 3, 1960, 319-325

TEXT: A device is described for measuring and stabilizing the magnetic field of a d.c. electromagnet. The device has the advantage (compared to earlier devices of this kind) of incorporating a single pickup for measuring a wide range of values of the magnetic field, and of stabilizing strong magnetic fields (up to 12.5 k oersted). Magnetic fields of 2.5 to 12.5 k oerst. were investigated. A basic diagram of the pickup is shown. Lithium (in a solution of LiCl is used as the source of nuclear signals. The LiCl solution

Card 1/4

Measurement and stabilization...

has an admixture of paramagnetic $FeCl_3$ or of $MnSO_4$; this is necessary for reducing the relaxation time. A block diagram of the measuring device is given. It contains an oscillator, rectifier, low-frequency amplifier, voltmeter and RC-filter. It was experimentally shown that the design of the pickup and of the oscillator ensure a high stability of frequency; for 8 - 10 hours of operation, the frequency oscillations did not exceed $1.5 \cdot 10^{-5}$ for a ±5% change in voltage. The amplification factor was chosen so that the output signal should be sufficient for controlling the stabilizing circuit (over 5 v). The observation of the nuclear signal and the measurement of the magnetic field were carried out by the ordinary method of G.K. Yagola et al. (Ref. 5: Izmeritel'naya tekhnika, no. 6, 1955). The accuracy of magnetic-field measurements is determined by the accuracy of frequency measurements (equal to $6 \cdot 10^{-5}$) and by the accuracy of determining the position of the signal on the oscillograph screen. The results of measuring the amplitude of the proton and lithium signals as a function of magnetic field strength are plotted for a 10 kw electromagnet. Another plot shows the results

Card 2/4

of signal-to-noise ratio measurements as a function of field strength. For lithium, the highest ratio was 10. The stabilizer contains an electromagnet with a principal and an auxiliary winding. The relative error δ_r consists of a dynamic and a static error. The static error was reduced to a minimum of 10 - 25%. In order to ensure stability of the system, the ratio of the time constant of the principal winding to time constant of the stabilization circuit was taken as equal to 2 - 3. Experimental curves are given with the relative error of the stabilization system. The total relative error does not exceed $3 \cdot 10^{-5}$ over the entire range of stabilized field strength (2.5 - 12.5 k oerst). In conclusion, the device was put into operation for a long time; it was found reliable and handy, and, therefore, used for experiments with magnetic analyzers. There are 7 figures and 12 references: 8 Soviet-bloc and 4 non-Soviet-bloc. The references to English-language publications read as follows: H.A. Thomas, Phys. Rev., 79, 339, 1950; N. Blombergen, E.M. Purcell, K.N. Pound, Phys. Rev. 73, 679, 1949.

Card 3/4

26588 S/185/60/005/003/003/020
D274/D303

Measurement and stabilization...

ASSOCIATION: Fizyko-tekhnichnyy instytut AN USSR (Physico-technical Institute AS UkrSSR)

SUBMITTED: August 14, 1959

Card 4/4

VIL'YAMS, A.P.; V'YUGOV, P.N. [V'iuhov, P.M.]; LEONTOVICH, A.K. [Leontovych, A.K.]

Amplitude analyzer with a single channel. Ukr. fiz. zhur. 5 no. 5:666-671 S-O '60. (MIRA 14:4)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Pulse height analyzers)

AFANAS'YEV, M.G. [Afanas'iev, M.H.]; GORDIYENKO, A.G. [Hordiienko, A.H.]; KOLISHICHENKO, L.K.; VIL'YAMS, A.P.; SIDORCHENKO, L.I.

Measurement and stabilization of the magnetic field of a powerful electromagnet by the nuclear magnetic resonance method. Ukr.fiz. zhur. 5 no.3:319-326 My-Je '60. (MIRA 13:8)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Electromagnets) (Magnetic fields) (Nuclear magnetic resonance)

30664
S/137/61/000/010/017/056
A006/A101

18.8100

AUTHORS: Kharper, Dzh., Vil'yams, A.Ye.

TITLE: Factors affecting the uranium tetrafluoride reduction with magnesium

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 10, 1961, 32, abstract 100256 (V sb. "Izvlecheniye i ochistka redk. metallov", Moscow, Atomizdat, 1960, 180 - 197, Discussion, 197 - 202)

TEXT: The reaction of UF_4 with Mg begins at 560°C; a sharp increase of the temperature takes place within the 600 - 650°C range. A great effect on the U yield in the ingot is exerted by the heating rate at > 400°C. At slow heating the yield is low due to the entanglement of U reguli in the slag. It is supposed that some products of side reactions as e.g. UO_2, which accumulate on the slag-metal interface, stabilize the droplets of molten U, preventing their fusion. When using a charge of low density, "preliminary" reactions take place to a considerable degree, such as for instance, the interaction of Mg and UF_4 vapors, resulting in the formation of hard to reduce UF_3. High yields are obtained at rapid heating of a sufficiently dense charge. It is recommended to line

Card 1/2

30664
S/137/61/000/010/017/056
A006/A101

Factors affecting the uranium tetrafluoride ..

the reactor with graphite and to fill the space between the lining and the body of the reactor with a heat-insulating material. The lining withstands up to 12 heats.

V. Kuznetsov

[Abstracter's note: Complete translation]

Card 2/2

VIL'YAMS, D.A.; DOLMATOVSKIY, Yu.A., inzhener, retsenzent; PETUKHOV, P.D. inzhener, retsenzent; VOINOV, A.V., redaktor; POPOVA,S.M., tekhnicheskiy redaktor; MODEL',B.I., tekhnicheskiy redaktor.

[Constructing curvilinear surfaces; a collection of drawings] Postroenie krivolineinykh poverkhnostei; al'bom chertezhei. (K al'bomu chertezhei prilagaetsia tekstovaia chast' otdel'noi knigoi] Moskva. Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1951. 95 p.(Chiefly illus.) (MLRA 8:11)
(Automobiles--Design and construction)

VIL'YAMS, D A

N/5
611.34
.V7

Postroyeniye Krivolineynykh Poverkhnostey (Plotting Curvilinear Planes)

Moskva, Mashgiz, 1951

78p.

AB 520146

VIL'YAMS, D.A.

Problem of shaping the surface of a vessel's hull. Vest.mash. 34 no.11: 17-24 N '54. (MLRA 7:11)

1. Avtozavod im. Molotova.
(Hulls (Naval architecture))

Vil'yams, D.A.

USSR/Engineering - Hull design

Card 1/1 Pub. 128 - 4/32

Authors : Vil'yams, D. A.

Title : A hull designing problem

Periodical : Vest. mash. 11, 17-24, Nov 1954

Abstract : A description is presented of methods for designing ship hulls and frame-works. Formulas for calculating the geometric configurations of hulls are given, together with graphic computation methods. Six USSR references; (1925-1953). Drawings; diagrams; graphs.

Institution : ...

Submitted : ...

VIL'YAMS, D.A.

Development of methods of shaping body surfaces. Avt.trakt.prom. no.6:10-16 Je '53. (MLRA 6:6)

1. Gor'kovskiy avtozavod im. Molotova. (Automobiles--Bodies)

BORKHSENIUS, N.S. [Borchsenius, N.]; VIL'YAMS, D.Dzh. [Williams, D.]

Scale insects of the genus Contigaspis MacGillivray (Homoptera, Coccoidea) in the world fauna. Ent. oboz. 42 no.3:594-610 '63. (MIRA 17:1)

1. Zoologicheskiy institut AN SSSR, Leningrad i Gosudarstvennyy institut entomologii, London.

VIL'YAMS, G.D.

48-8-5/25

AUTHORS: Bozort, R.M., Vil'yams, G.D., Uolsh, Doroti Ye.

TITLE: Magnetic Properties of a Number of Orthoferrites and Cyanides at Low Temperatures (Magnitnyye svoystva nekotorykh ortoferritov i tsianidov pri nizkikh temperaturakh)

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 8, pp. 1072 - 1082 (USSR)

ABSTRACT: The paper deals with the magnetic properties of a number of compounds at temperatures below 1,3°K. Two types are considered: $GdFeO_3$, Gd being replaceable by another element, and $Fe(FeC_6N_6)$, where the Fe-cations are replaced by Mn, Co or Zn. The measuring apparatus consisted of a compensation winding, mounted on the tip of a pendulum with a length of 165 cm. The pendulum was fixed to its support by a narrow elastic strip, which enabled the pendulum to oscillate. On both sides of this strip tensometric indicators are mounted to register every motion of the pendulum. The indicators were connected to form the two branches of a magnetic bridge. The lower, movable tip of the pendulum with the winding containing the sample is situated between the poles of an electric magnet. By means of current variation a voltage

Card 1/3